

What is claimed:

1. An antiglare mirror apparatus in a vehicle compartment comprising:
 - a mirror member; said mirror member that is an electrochromic element comprising:
 - an antiglare material comprising an electrochromic layer,
 - a light transmission electrode material, and
 - a light reflective electrode material, wherein said light transmission electrode material is disposed on one side of said antiglare material and said light reflective electrode material is disposed on the other side of said antiglare material;
 - a power source member that supplies a drive-electric energy to said electrochromic element;
 - a signal generator that generates a driving electric signal of said electrochromic element;
 - a control circuit that controls said drive-electric energy to said electrochromic element based upon said driving electric signal; and
 - a holder that holds the mirror member, said holder being detachably mounted to a facility in a vehicle compartment.
2. An antiglare mirror apparatus according to claim 1, wherein said holder is by itself mounted to the facility of the vehicle compartment so that said mirror member covers a pre-mounted inner mirror.
3. An antiglare mirror apparatus according to claim 2, wherein said holder comprises a clip member that holds the inner mirror with an upper edge portion and a lower edge portion of the inner mirror being placed into said clip member, said clip member by itself mounting said holder to the facility in the vehicle compartment.
4. An antiglare mirror apparatus according to claim 2, wherein said holder comprises a rubber band, wherein said rubber band is mounted to the facility in the vehicle compartment by said rubber band being wound around the inner mirror.

5. An antiglare mirror apparatus according to claim 2, wherein said control circuit is disposed inside said holder between said light reflective electrode material and said inner mirror.

6. An antiglare mirror apparatus according to claim 1, wherein said control circuit is disposed outside of said holder.

7. An antiglare mirror apparatus according to claim 1, wherein said antiglare material is constituted by mixing an electrochromic compound into a light transmission electrolyte.

8. An antiglare mirror apparatus according to claim 1, wherein said antiglare material comprises a light transmission electrolyte layer and an electrochromic compound layer.

9. An antiglare mirror apparatus according to claim 1, wherein said power source member comprises a wire that is connected to a socket of a cigarette lighter of a vehicle.

10. An antiglare mirror apparatus according to claim 1, wherein said electrochromic element is driven in the direction of coloring or non-coloring based upon a driving electric signal generated from said signal generator and said control circuit controls a supply state of said drive-electric energy based upon said driving electric signal.

11. An antiglare mirror apparatus according to claim 10, wherein said signal generator is a manual switch that generates a signal of the coloring or the non-coloring and said control circuit transforms the supply state of said drive-electric energy to the direction of the coloring or the non-coloring based upon said driving electric signal generated from said manual switch.

12. An antiglare mirror apparatus according to claim 11, wherein said manual switch chooses a plurality of coloring levels and said control circuit controls a supply amount of said drive-electric energy based upon said driving electric signal regarding the coloring levels generated from said manual switch.

13. An antiglare mirror apparatus according to 10, wherein said signal generator comprises a specific light sensor that detects a light amount of light from a specific direction, and said control circuit determines a variation amount of the light amount detected for every predetermined time by said specific light sensor and controls the supply state of said drive-electric energy based upon information of said variation amount.

14. An antiglare mirror apparatus according to claim 13, wherein said control circuit comprises:

a specific light information input unit that receives the information regarding said variation amount;

a specific light level judgment unit that judges the coloring level by comparing the information input into said specific light information input unit with a predetermined light amount threshold value; and

a drive-energy output unit that determines the supply state of said drive-electric energy corresponding to the coloring level judged by said specific light level judgment unit.

15. An antiglare mirror apparatus according to claim 10, wherein said signal generator comprises a surrounding light sensor that detects a light amount around a vehicle and said control circuit controls the supply state of said drive-electric energy based upon the light amount detected by said surrounding light sensor.

16. An antiglare mirror apparatus according to claim 15, wherein said control circuit comprises:

a surrounding light information input unit that receives information regarding the light amount detected by said surrounding light sensor;

a surrounding light level judgment unit that judges a coloring level by comparing the information input into said surrounding light information input unit with a predetermined light amount threshold value; and

a drive-energy output unit that determines the supply state of said drive-electric energy corresponding to the coloring level judged by said surrounding light level judgment unit.

17. An antiglare mirror apparatus according to claim 10, wherein said signal

generator comprises:

 a surrounding light sensor that detects a light amount around a vehicle;
and

 a specific light sensor that detects a light amount of light from a specific direction and

 wherein said control circuit determines a variation amount based upon the light amount detected for every predetermined time by said specific light sensor, determines a coloring state of said mirror member based upon the variation amount and the light amount detected by said surrounding light sensor, and controls the supply state of said drive-electric energy corresponding to the determined coloring state.

18. An antiglare mirror apparatus according to claim 17, wherein said control circuit comprises:

 a surrounding light information input unit that receives information regarding a light amount of a surrounding light from said surrounding light sensor;

 a specific light information input unit that receives information regarding a variation amount of a light amount detected for every predetermined time by said specific light sensor;

 a surrounding light level judgment unit that determines a first coloring level A_i as numerical information by comparing the information input into said surrounding light information input unit with a predetermined light amount threshold value;

 a specific light level judgment unit that determines a second coloring level B_i as numerical information by comparing the information input into said specific light information input unit with a predetermined light amount threshold value;

 a coloring level determination unit that determines a third coloring level C by performing a certain calculation to the first coloring level A_i and the second coloring level B_i ; and

 a drive-energy output unit that determines the supply state of said drive-electric energy corresponding to the third coloring level C determined by said coloring level determination unit.

19. An antiglare mirror apparatus according to 18, wherein said certain

calculation is executed according to an equation of $C = A_i \times h + B_j \times (1 - h)$.
h: a ratio of how much the surrounding light affects the variation amount of the light amount from the specific direction.

20. An antiglare mirror apparatus according to claim 10, wherein said signal generator comprises:

a manual switch that generates a signal regarding a plurality of coloring levels; and

a specific light sensor that detects a light amount of light from a specific direction and

wherein said control circuit determines a variation amount based upon a light amount detected for every predetermined time by said specific light sensor, determines a coloring state of said mirror member based upon said variation amount and information of the coloring level from said manual switch, and controls the supply state of said drive-electric energy corresponding to the determined coloring state.

21. An antiglare mirror apparatus according to claim 1, further comprising an indicator that indicates a driving state of said electrochromic element.

22. An antiglare mirror apparatus in a vehicle compartment comprising:

a mirror member; said mirror member that is an electrochromic element comprising:

an antiglare material comprising an electrochromic layer,

a light transmission electrode material, and

a light reflective electrode material, wherein said light transmission electrode material is disposed on one side of said antiglare material and said light reflective electrode material is disposed on the other side of said antiglare material;

a power source supply means that supplies a drive-electric energy to said electrochromic element;

a signal generation means that generates a driving electric signal of said electrochromic element;

a control circuit means that controls said drive-electric energy to said electrochromic element based upon said driving electric signal; and

a holder that holds the mirror member, said holder being detachably

mounted to a facility in a vehicle compartment.